



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Rogers Brothers Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'Vitagreen'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 18th day of May in the year of our Lord one thousand nine hundred and seventy-eight

Attest:

Samuel B. Lane

Acting

Commissioner

Plant Variety Protection Office

Grain Division

Agricultural Marketing Service

B. B. England

Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY GP 73102	1b. VARIETY NAME VITAGREEN (Proposed)	FOR OFFICIAL USE ONLY	
		PV NUMBER 7700103	
2. KIND NAME SNAP BEAN	3. GENUS AND SPECIES NAME Phaseolus vulgaris	FILING DATE 9-9-77	TIME 10:00 A.M.
4. FAMILY NAME (BOTANICAL) Leguminosae	5. DATE OF DETERMINATION Fall, 1973	FEE RECEIVED \$ 250.00 \$ 250.00 \$ 250.00	DATE 6-20-77 6-20-77 5-5-78
6. NAME OF APPLICANT(S) ROGERS BROTHERS SEED COMPANY	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 1647 Idaho Falls, Idaho 83401	8. TELEPHONE AREA CODE AND NUMBER 208-522-0143	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Delaware	11. DATE OF INCORPORATION 1975

12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

Mr. Charles Green, Administrative Assistant
ROGERS BROTHERS SEED COMPANY
P. O. Box 1647
Idaho Falls, Idaho 83401

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed?
(See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO14B. Does the applicant(s) specify that this variety be limited as to number of generations?
☐ YES ☐ NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed?

☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal?

☒ YES ☐ NO

16. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

June 20, 1977

(DATE)

Charles Green
(SIGNATURE OF APPLICANT)
For Rogers Brothers Seed Company

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(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, National Agricultural Library, Beltsville, Maryland 20705. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give (1), the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.

14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

VITAGREEN

Snap Bean

EXHIBIT AOrigin and Breeding History of the Variety

VITAGREEN, a mid to late season, green podded garden bean was derived from the following hand-pollinated cross:

(USDA B3125-X-5-2) (USDA 1343) X (OSU 58)

The above cross was made during the Fall of 1967 and the following series of subsequent selections were made:

<u>YEAR</u>	<u>GENERATION</u>	<u>FIELD PLOT</u>	<u>AMOUNT HARVESTED</u>
1968	F ₁	681204	2 Ounces
1969	F ₂	691192	Single plant selection
1969-1970 (Green-house)	F ₃	-----	Single plant selection increase
1970	F ₄	701087	4 Single plant selections
1970-1971 (Green-house)	F ₅	-----	Single plant selection "A" increase
1971	F ₆	71969	2 single plant selections
1972	F ₇	72642	28 ounces
1973	F ₇ Bulk	73102	2 pounds
1973	F ₇ Bulk	73498	20 pounds

The harvested seed of plots 73102 and 73498 has been multiplied each consecutive year since 1973 and has been increased to an adequate quantity for commercial sale. Eight single plant selections were harvested from the original VITAGREEN line during the 1975 season and these are being increased as pure line stocks to maintain the variety.

Variant types occurring in VITAGREEN have consisted of approximately one flat pod rogue per 1800 plants and one string pod rogue per 137,000 plants.

VITAGREEN

Snap Bean

EXHIBIT BDate Indicative of Novelty

VITAGREEN is most similar to Early Gallatin, but the pod color is darker green and is a more blue-green color. VITAGREEN pods have slower seed and fiber development and will yield about 5% to 10% more pods that are of the five sieve size or larger. VITAGREEN is resistant to Summer Death, a virus disease common to Australia, while Early Gallatin is not.

OBJECTIVE DESCRIPTION OF VARIETY

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)	FOR OFFICIAL USE ONLY
ROGERS BROTHERS SEED COMPANY	PVPO NUMBER 7700103
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	VARIETY NAME OR TEMPORARY DESIGNATION
P. O. Box 1647	VITAGREEN
Idaho Falls, Idaho 83401	

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in first box (e.g.

0	8	9
---	---	---

 or

0	9
---	---

) when number is either 99 or less or 9 or less.

1. TYPE:

1 = SNAPBEAN 2 = GREEN SHELL 3 = DRY EDIBLE 4 = MULTIPURPOSE

2. SEASON AND REGION OF ADAPTABILITY IN THE U.S.:

2 Grows best during: 1 = SPRING 2 = SUMMER 3 = FALL 4 = WINTER

Best adapted in: 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST
5 = SOUTHWEST 6 = MOST REGIONS

3. MATURITY (Days from seeding to first harvest):

<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">6</div> <div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">0</div>	GREEN PODS	<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">7</div> <div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">0</div>	GREEN SHELLS	<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">9</div> <div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">8</div>	DRY SEEDS
<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">0</div> <div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">1</div>	NO. DAYS EARLIER THAN -----	<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">1</div>	1 = TENDERCROP 4 = WHITE KIDNEY 7 = BUSH BLUE LAKE	2 = KENTUCKY WONDER 5 = MICHELITE 62 8 = OTHER (Specify)	3 = KINGHORN WAX 6 = DWARF HORTICULTURAL
<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">0</div> <div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">4</div>	NO. DAYS LATER THAN -----	<div style="border: 1px solid black; display: inline-block; padding: 2px 5px;">3</div>			

4. PLANT:

1 = DETERMINATE, ERECT BUSH
3 = DETERMINATE, SEMIPOLE
2 = DETERMINATE, SPRAWLING BUSH
4 = INDETERMINATE, POLE

0 4 6 CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE

0 0 3 NUMBER PRIMARY BRANCHES PER MAIN STALK

2 Branching habit: 1 = COMPACT 2 = OPEN

0 2 CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

1 Main stalk: 1 = BRITTLE 2 = WIREY 1 1. STOUT 2. THIN

2 Flower position:

2 Pod Position: 1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5 1 CM. SPREAD

0 5 NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

0 6 MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

5. LEAVES:

2	1 = SMOOTH 2 = WRINKLED	1	1 = DULL 2 = GLOSSY	2	Thickness: 1 = THIN 2 = MEDIUM 3 = THICK
3	Size: 1 = SMALL (<i>Earliwax</i>) 2 = MEDIUM 3 = LARGE (<i>Tendercrop</i>)			11	CM. PETIOLE LENGTH (To basal leaflets of first trifoliate leaf)
2	Tip shape of center leaflet: 1 = ROUNDED 2 = TAPER POINTED 3 = SHARP POINTED				
2	PUBESCENCE - Dorsal: } 1 = NONE 2 = SLIGHT 3 = CONSIDERABLE				4
1	PUBESCENCE - Ventral: }				
2	Color: 1 = LIGHT GREEN (<i>Bountiful</i>) 2 = MEDIUM GREEN 3 = DARK GREEN (<i>Bush Blue Lake</i>)				

VITAGREEN

Snap Bean

EXHIBIT DBotanical Description of the Variety

VITAGREEN is a mid to late season green podded snap bean variety that reaches green harvest stage in approximately 60 days, which is comparable to the season of the variety, Early Gallatin. The bush of VITAGREEN is erect and the width is about equal to the height. It has a moderately branching bush which holds the pods off the ground well and towards the periphery of the plant, making it well adapted to mechanical harvesting. The bush closely resembles that of Early Gallatin, but has slightly larger leaves. The pods are typically 13 to 14 cm long, and are quite round at prime green processing stage, but tend to become moderately creasebacked as they become more mature. The pod color of VITAGREEN is slightly darker than that of Early Gallatin and has a more blue-green hue as compared to the more yellow-green hue of Early Gallatin. Fiber and seed development are slower in VITAGREEN than in Early Gallatin and are more typical of the Blue Lake pod type in this regard. The seedcoat color of VITAGREEN at the mature, dry seed stage is white.

OBJECTIVE DESCRIPTION OF VARIETY
BEAN (PHASEOLUS VULGARIS)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) ROGERS BROTHERS SEED COMPANY	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P. O. Box 1647 Idaho Falls, Idaho 83401	PVPO NUMBER 7700103
	VARIETY NAME OR TEMPORARY DESIGNATION VITAGREEN

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g. or) when number is either 99 or less or 9 or less.

1. TYPE:

<input type="text" value="1"/> 1 = SNAPBEAN	<input type="text" value="2"/> 2 = GREEN SHELL	<input type="text" value="3"/> 3 = DRY EDIBLE	<input type="text" value="4"/> 4 = MULTIPURPOSE
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2. SEASON AND REGION OF ADAPTABILITY IN THE U.S.:

<input type="text" value="2"/> Grows best during:	<input type="text" value="1"/> 1 = SPRING	<input type="text" value="2"/> 2 = SUMMER	<input type="text" value="3"/> 3 = FALL	<input type="text" value="4"/> 4 = WINTER
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<input type="text" value="6"/> Best adapted in:	<input type="text" value="1"/> 1 = NORTHWEST <input type="text" value="5"/> 5 = SOUTHWEST	<input type="text" value="2"/> 2 = NORTHCENTRAL <input type="text" value="6"/> 6 = MOST REGIONS	<input type="text" value="3"/> 3 = NORTHEAST	<input type="text" value="4"/> 4 = SOUTHEAST
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3. MATURITY (Days from seeding to first harvest):

<input type="text" value="6"/> <input type="text" value="0"/> GREEN PODS	<input type="text" value="7"/> <input type="text" value="0"/> GREEN SHELLS	<input type="text" value="9"/> <input type="text" value="8"/> DRY SEEDS
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<input type="text" value="0"/> <input type="text" value="1"/> NO. DAYS EARLIER THAN	<input type="text" value="1"/> 1 = TENDERCROP	<input type="text" value="2"/> 2 = KENTUCKY WONDER	<input type="text" value="3"/> 3 = KINGHORN WAX
<input type="text" value="0"/> <input type="text" value="4"/> NO. DAYS LATER THAN	<input type="text" value="4"/> 4 = WHITE KIDNEY	<input type="text" value="5"/> 5 = MICHELITE 62	<input type="text" value="6"/> 6 = DWARF HORTICULTURAL
	<input type="text" value="7"/> 7 = BUSH BLUE LAKE	<input type="text" value="8"/> 8 = OTHER (Specify)	

4. PLANT:

<input type="text" value="1"/> 1 = DETERMINATE, ERECT BUSH	<input type="text" value="2"/> 2 = DETERMINATE, SPRAWLING BUSH
<input type="text" value="3"/> 3 = DETERMINATE, SEMIPOLE	<input type="text" value="4"/> 4 = INDETERMINATE, POLE

<input type="text" value="0"/> <input type="text" value="4"/> <input type="text" value="6"/> CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE
--

<input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="3"/> NUMBER PRIMARY BRANCHES PER MAIN STALK

<input type="text" value="2"/> Branching habit: <input type="text" value="1"/> 1 = COMPACT <input type="text" value="2"/> 2 = OPEN
--

<input type="text" value="0"/> <input type="text" value="2"/> CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF
--

<input type="text" value="1"/> Main stalk: <input type="text" value="1"/> 1 = BRITTLE <input type="text" value="2"/> 2 = WIREY	<input type="text" value="1"/> 1. STOUT <input type="text" value="2"/> 2. THIN
--	--

<input type="text" value="2"/> Flower position:

<input type="text" value="2"/> Pod Position:	<input type="text" value="1"/> 1 = LOW, CONCENTRATED	<input type="text" value="2"/> 2 = HIGH, CONCENTRATED	<input type="text" value="3"/> 3 = SCATTERED
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5. LEAVES:

<input type="text" value="2"/> 1 = SMOOTH <input type="text" value="2"/> 2 = WRINKLED	<input type="text" value="1"/> 1 = DULL <input type="text" value="2"/> 2 = GLOSSY	<input type="text" value="2"/> Thickness: <input type="text" value="1"/> 1 = THIN <input type="text" value="2"/> 2 = MEDIUM <input type="text" value="3"/> 3 = THICK
---	---	--

<input type="text" value="3"/> Size: <input type="text" value="1"/> 1 = SMALL (Earliwax) <input type="text" value="2"/> 2 = MEDIUM <input type="text" value="3"/> 3 = LARGE (Tendercrop)
--

<input type="text" value="2"/> Tip shape of center leaflet: <input type="text" value="1"/> 1 = ROUNDED <input type="text" value="2"/> 2 = TAPER POINTED <input type="text" value="3"/> 3 = SHARP POINTED	<input type="text" value="11"/> CM. PETIOLE LENGTH (To basal leaflets of first trifoliate leaf)
--	---

<input type="text" value="2"/> PUBESCENCE - Dorsal:

<input type="text" value="1"/> PUBESCENCE - Ventral:
--

<input type="text" value="1"/> 1 = NONE	<input type="text" value="2"/> 2 = SLIGHT	<input type="text" value="3"/> 3 = CONSIDERABLE
---	---	---

<input type="text" value="2"/> Color: <input type="text" value="1"/> 1 = LIGHT GREEN (Bountiful) <input type="text" value="2"/> 2 = MEDIUM GREEN <input type="text" value="3"/> 3 = DARK GREEN (Bush Blue Lake)

6. FLOWERS:

1 Color: 1 = WHITE 2 = CREAM 3 = PINK 4 = LILAC 5 = PURPLE
6 = OTHER (Specify) _____

3 Racemes: 1 = LONG 2 = MEDIUM 3 = SHORT 3 NUMBER FLOWERS PER RACEME

7. FRESH PODS: (Edible maturity, averages for 10 pods)

3 Color: 1 = LIGHT GREEN (Bountiful) 2 = MEDIUM GREEN (Tendergreen) 3 = DARK GREEN (Wade)
4 = LIGHT YELLOW (Brittlewax) 5 = GOLDEN YELLOW (Cherokee Wax) 6 = GREEN-RED VARIAGATED (Horticultural)
7 = OTHER (Specify) _____

1 4 CM. LENGTH 9 8 MM. WIDTH (Between sutures) 10 4 MM. THICKNESS 9 4 $\frac{\text{WIDTH}}{\text{THICKNESS}} \times 10$

4 Cross section pod shape: 1 = FLAT 2 = OVAL 3 = CREASEBACK 4 = ROUND

2 Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED 2 Pubescence: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

2 Constrictions: 1 = NONE 2 = SLIGHT 3 = DEEP 2 Spur: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

2 Surface: 1 = SHINY 2 = DULL 1 Surface: 1 = SMOOTH 2 = BLISTERED

2 Pod flesh: 1 = LIGHT 2 = DARK 1 Pod flesh: 1 = FIRM 2 = WATERY

12 MM. SPUR LENGTH 2 Suture string: 1 = PRESENT 2 = ABSENT

2 Fiber: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE 1 Seed development: 1 = SLOW 2 = MEDIUM 3 = FAST

6 NUMBER OF SEEDS PER POD 9 NUMBER PODS PER PLANT (Once over harvest)

6 NUMBER MARKETABLE PODS PER PLANT (Once over harvest) 1 Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

8. SEED COAT COLOR:

1 1 = MONOCHROME 2 = POLYCHROME 1 1 = SHINY 2 = DULL

1 Primary color: 1 = WHITE 2 = YELLOW 3 = BUFF 4 = TAN
11 Secondary color: 5 = BROWN 6 = PINK 7 = RED 8 = PURPLE

9 = BLUE 10 = BLACK 11 = OTHER (Specify) Green

1 Color pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

8 Secondary color location: 1 = HILAR RING 2 = HILAR SURFACE
3 = STROPHIOLE 4 = MICROPYLE
5 = SIDES 6 = DORSAL SURFACE
7 = NOT RESTRICTED TO ANY AREA 8 = COMBINATION OF LOCATIONS (Specify) Gradations from White to Green

1 Hilar ring: 1 = NOT PRESENT 2 = NARROW 3 = BUTTERFLY SHAPED

2 Vein-like under coat pattern: 1 = ABSENT 2 = PRESENT

9. SEED SHAPE AND SIZE:

1 Hilum view: 1 = ELLIPTICAL 2 = OVAL 3 = ROUND 3 Side view: 1 = OVAL 2 = ROUND
3 = KIDNEY 4 = TRUNCATE ENDS

2 Cross section: 1 = ELLIPTICAL 2 = OVAL 33 GM. WEIGHT PER 100 SEEDS
3 = CORDATE 4 = ROUND

2 Classification: 1 = PEA 2 = MEDIUM 3 = MARROW 4 = KIDNEY 5 = PINTO

5 9 MM. WIDTH (Dorsal to ventral) 5 5 MM. THICKNESS (Side to side)

1 3 MM. LENGTH 1 0 7 $\frac{\text{WIDTH}}{\text{THICKNESS}} \times 10$

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10. ANTHOCYANIN: (1 = Absent 2 = Present):

☒ FLOWERS ☒ STEMS ☒ PODS ☒ SEEDS ☒ LEAVES

11. DISEASE RESISTANCE (0 = Not tested; 1 = Susceptible; 2 = Resistant):

<input type="checkbox"/> RUST (Specify race) _____	<input type="checkbox"/> ANGULAR LEAF SPOT
<input type="checkbox"/> BACTERIAL WILT	<input checked="" type="checkbox"/> COMMON BEAN MOSAIC <i>set</i>
<input type="checkbox"/> ANTHRACNOSE	<input type="checkbox"/> YELLOW BEAN MOSAIC <i>770938</i>
<input type="checkbox"/> SOUTHERN BEAN MOSAIC	<input type="checkbox"/> FUSARIUM ROOT ROT
<input type="checkbox"/> CURLY TOP	<input checked="" type="checkbox"/> N.Y. 15 BEAN MOSAIC
<input type="checkbox"/> POWDERY MILDEW	<input type="checkbox"/> BEAN MOSAIC VIRUS 4
<input type="checkbox"/> HALO BLIGHT	<input type="checkbox"/> FUSCOUS BLIGHT
<input type="checkbox"/> ALFALFA MOSAIC VIRUS	<input type="checkbox"/> ALFALFA MOSAIC VIRUS 2
<input type="checkbox"/> POD MOTTLE VIRUS	<input type="checkbox"/> RED NODE VIRUS
<input type="checkbox"/> ROOT KNOT NEMATODE	<input checked="" type="checkbox"/> OTHER (Specify) <u>Summer Death</u>

12. INSECT RESISTANCE: (0 = Not tested; 1 = Susceptible; 2 = Resistant)

<input type="checkbox"/> APHIDS	<input type="checkbox"/> LEAF HOPPERS
<input type="checkbox"/> POD-BORER	<input type="checkbox"/> LYGUS
<input type="checkbox"/> THRIPS	<input type="checkbox"/> WEAVILS
<input type="checkbox"/> SEED CORN MAGGOT	<input type="checkbox"/> OTHER (Specify) _____

13. PHYSIOLOGICAL RESISTANCE: (0 = Not tested; 1 = Susceptible; 2 = Resistant)

☐ HEAT ☐ COLD ☐ DROUGHT ☐ OTHER (Specify) _____

REFERENCES: The following publications may be used as a reference in completing this form:

1. Beans of New York. Vol. 1 Part II of Vegetables of New York. U.P. Hedrick et al. J. B. Lyon Company, Albany, N.Y. 1931.
2. Yarnell, S. H., Cytogenetics of the Vegetable Crops IV. Legumes. Bot. Rev. 31:247 - 330. 1965.
3. USDA Yearbook of Agriculture. 1937.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.